

**APPENDIX 2-1**  
**QUESTAR EXPLORATION & PRODUCTION**  
***STANDARD OPERATING PRACTICES***  
**&**  
***SURFACE USE PLAN***



**QUESTAR EXPLORATION & PRODUCTION (QEP)  
FOR GREEN RIVER FORMATION WELLS LOCATED IN  
RED WASH, WONSITS VALLEY, GYPSUM HILLS, WHITE RIVER,  
GLEN BENCH, AND UNDESIGNATED FIELDS IN  
TOWNSHIPS 07 AND 08 SOUTH, RANGES 21 TO 24 EAST**

**Uintah County, Utah**

**STANDARD OPERATING PRACTICES**

***DRILLING PROGRAM***

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43CFR3100), Onshore Oil and Gas Orders, and the approved plan of operations. The Operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to insure compliance.

**BLM Notification Requirements**

All notifications will be during normal working hours, Monday through Friday.

Location Construction: At least 48 hours prior to construction of location and access roads including notification, if applicable, to other surface management agencies such as the Ute Tribe Energy and Mineral Department, State of Utah, or private surface owner.

Location Completion: Prior to moving the drilling rig.

Spud Notice: At least 24 hours prior to spudding the well.

Casing String & Cementing: At least 24 hours prior to running casing and cementing all casing strings

BOP & Related Equipment Tests: At least 24 hours prior to initiating pressure tests.

First Production Notice: Within 5 days after new well begins or production resumes after well has been off production for more than 90 days.

Details of the on-site inspection, including date, time, weather conditions, and individuals present, will be submitted with the site-specific APD.

**1. Estimated Tops of Important Geologic Markers:**

Formations and depths will be submitted with the site-specific APD.

**2. Anticipated Depths of Oil, Gas, Water, and Other Mineral Bearing Zones**

Formations and depths will be submitted with the site-specific APD.

All usable (<10,000 ppm TDS) water and prospectively valuable minerals (as described by BLM representatives at the on-site) encountered during drilling will be recorded by depth and

adequately protected. All oil and gas shows will be tested to determine commercial potential. This information shall be reported to the BLM Vernal Field Office (BLM/VFO).

All water shows and water bearing geologic units will be reported to the geologic/engineering staff of the BLM/VFO prior to running the next string of casing or before plugging orders are requested. Usage of the State of Utah form Report of Water Encountered is acceptable, but not required.

All water shows will be reported within 1 (one) business day after being encountered.

Detected water flows shall be sampled, analyzed, and reported to the geologic/engineering staff of the BLM/VFO. The office may request additional water samples for further analysis.

The following information is requested for water shows and samples where applicable:

- Location
- Temperature
- Hardness
- Flow Rate
- Date Sampled
- Sampled Interval
- pH

Water Classification (according to State of Utah)

- Dissolved Iron (Fe) (ug/l)
- Dissolved Magnesium (Mg) (mg/l)
- Dissolved Sulfate (SO<sub>4</sub>) (mg/l)
- Dissolved Total Solids (TDS) (mg/l)
- Dissolved Calcium (Ca) (mg/l)
- Dissolved Sodium (Na) (mg/l)
- Dissolved Bicarbonate (NaHCO<sub>3</sub>) (mg/l)
- Dissolved Carbonate (CO<sub>3</sub>)(mg/l)
- Dissolved Chloride (Cl) (mg/l)

### **3. Pressure Control Equipment: (Exhibit A)**

QEP's minimum specifications for pressure control equipment are as follows:

The BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc., for a 2M system when the well is drilled to the base of the Green River Formation and individual components shall be operable as designed. Chart recorders will be used for all pressure tests.

Test charts, with individual test results identified, shall be maintained on location while drilling and will be made available to a BLM representative upon request.

All required BOP tests and/or drills will be recorded in the IADC report.

If an air compressor is on location and is being utilized to provide air for the drilling medium while drilling, the special drilling requirements in Onshore Oil and Gas Order No. 2, regarding air or gas shall be adhered to. If a mist system is being utilized, the requirement for a deduster shall be waived.

**4. Proposed Casing and Cementing Program:**

- a. The proposed Casing Program will be as follows:

<u>Purpose</u>	<u>Depth</u>	<u>Hole Size</u>	<u>Casing Size</u>	<u>Type</u>	<u>Connection</u>	<u>Weight (lb/ft)</u>
Surface	450'	12¼"	9"	K-55	LT&C	36 (new)
Production	TD	7"	5½"	K-55	LT&C	1.5 (new)

The proposed casing and cementing program shall be conducted as approved to protect and/or isolate all usable water zones and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat opposite a competent formation which will contain the maximum pressure to which it will be exposed during normal drilling operations. Determination of casing setting depth shall be based on all relevant factors, including: presence/absence of hydrocarbons, fracture gradients, usable water zones, formation pressures, lost circulation zones, other minerals, or other unusual characteristics.

All casing, except conductor casing, shall be new or reconditioned and tested. Used casing shall meet or exceed API standards for new casing. If drive pipe is used, it may be left in place if its total length is less than twenty feet below the surface. If the total length of the drive pipe is equal to or greater than twenty feet, it will be pulled prior to cementing surface casing, or it will be cemented in place.

At a minimum, usable water zones shall be isolated and/or protected by having a cement top for the production casing at least 200 feet above the base of the usable water. If gilsonite is encountered while drilling, it shall be isolated and/or protected via the cementing program.

Surface casing shall have centralizers on the bottom three (3) joints, with a minimum of one (1) centralizer per joint.

Top plugs shall be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, such as a suitable preflush fluid, inner string cement method, etc., shall be utilized to help isolate the cement from contamination by the mud being displaced ahead of the cement slurry.

All casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string length or to 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield. If pressure declines more than 10% in 30 minutes, corrective action shall be taken.

Casing design will be subject to revision based on geologic conditions encountered.

The surface casing shall be cemented back to surface either during the primary cement job or by remedial cementing

b. The Cement Program will be as follows:

<u>Surface</u>	<u>Fill</u>	<u>Type &amp; Amount</u>
0-450'	450'	A minimum of 175 sx Premium Plus Type V +2%CaCl <sub>2</sub> , 15.6 ppg, 0.25 poly flake 1.18 cf/sx (cement will be circulated to surface, about 25% excess)
<hr/>		
<u>Production</u>		<u>Type &amp; Amount</u>
500' above productive internal-surface		Lead: Extended, Lite, or Hi-Fill cement +additives, 11 or 12 ppg, 3.81 cf/sx.
TD-500' above productive interval		Tail: Extended Class "G" or 50:50 Poz +additives, 14 ppg; or RFC, 14.0-14.5 ppg, 1.25 cf/sx.

For production casing, actual cement volumes will be determined from the caliper log plus 10 - 15% excess.

For surface casing, waiting on cement time will be adequate to achieve 500 psi compressive strength at the casing shoe prior to drilling out.

Anticipated cement tops will be reported as to depth, not the expected number of sacks of cement to be used. The BLM/VFO shall be notified, at least 24 hours, in order to have a BLM/VFO representative on location while running all casing strings and cementing.

After cementing the surface pipe and/or any intermediate strings, but before commencing any test, the casing string shall stand cemented until the cement has reached a compressive strength of at least 500 psi at the shoe. WOC time shall be recorded in the Driller's Log.

c. The following reports shall be filed with the BLM/VFO within 30 days after the work is completed:

Progress reports, Form 3160-5, "Sundry Notices and Reports on Wells," will include the following information:

Setting of each string of casing showing the size; grade; weight of casing set; setting depth; amounts and type of cement used; whether cement circulated or the top of the cement behind the casing; depth of the cementing tools used; casing testing method and results; and, the date of the work done. Spud Date will be shown on the first reports submitted.

d. Auxiliary well control equipment to be used:

1. Kelly cock.
2. A bit float is not deemed necessary.
3. A sub with a full opening (TIW) valve having threads compatible with drill string tubulars.

**5. Drilling Fluids Program:**

- a. Green River wells:

<u>Interval</u>	<u>Type</u>	<u>Mud Weight</u>
0' – TD	Water/LSND (as hole conditions warrant).	8.7 to 12 ppg

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- b. No chromate additives will be used in the mud system on Federal and/or Indian lands without prior BLM approval to ensure adequate protection of fresh aquifers.
- c. No chemicals subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completing of this well.

**6. Evaluation Program:**

- a. Logging Program:

DLL/CALIPER: TD to base of surface casing.

FDC/CNL/GR: TD - 2,500'

Drill Stem Tests: As deemed necessary.

Cores: As deemed necessary.

When cement has not been circulated to surface, the cement top will be determined by either a temperature survey or cement bond log. Should a temperature survey fail to locate the cement top, a cement bond log will be run. A field copy will be submitted to the BLM/VFO Authorized Officer (AO).

The Evaluation Program may change at the discretion of the well site geologist with approval by the BLM/VFO AO.

When utilized, mud or lithology logs will be submitted to the BLM/VFO AO.

Drill stem tests, if they are run, will adhere to the following requirements:

Initial opening of the drill stem test tools shall be restricted to daylight hours unless specific approval to start during other hours is obtained from the Authorized Officer. However, DSTs may be allowed to continue at night if the test was initiated during daylight hours and the rate of flow is stabilized and if adequate lighting is available (i.e., lighting which is adequate for visibility and vapor-proof for safe operations). Packers can be released, but tripping shall not begin before daylight, unless prior approval is obtained from the Authorized Officer. Closed chamber DST's may be performed day or night.

Some means of reverse circulation shall be provided in case of flow to the surface showing evidence of hydrocarbons.

Separation equipment required for the anticipated recovery shall be properly installed before a test starts.

If a drill stem test is performed, all engines within 100 feet of the wellbore that are required to be operational during the test shall have spark arresters or water-cooled exhausts.

Daily drilling reports shall be submitted to the BLM/VFO after drilling operations are completed for each well, and daily completion records shall be submitted with the completion report for each well.

- b. Whether the well is completed as a dry hole or a producer, the "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. One copy of all logs, core description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations will be filed with Form 3160-4. Samples (cuttings, fluids, and/or gases) will be submitted when requested by the BLM/VFO AO.

**7. Abnormal Conditions:**

No abnormal temperatures or pressures are anticipated. No hydrogen sulfide has been encountered or is known to exist from previous drilling in the area at this depth. Maximum anticipated bottomhole pressure will approximately equal total depth in feet multiplied by a 0.4 psi/foot gradient. These pressures will be expressed in psi in each site-specific APD.

**8. Anticipated Starting Dates and Notification of Operations:**

- a. Drilling Activity

Anticipated Commencement Date:	Upon approval of the site-specific APD.
Drilling Days:	Approximately 10 days.
Completion Days:	Approximately 7 days.

- b. Notification of Operations

The BLM/VFO will be notified at least 24 hours **prior** to the commencement of spudding the well (to be followed with a Sundry Notice, Form 3160-5), of initiating pressure tests of the blowout preventer and related equipment, and running casing and cementing of all casing strings. Notification will be made during regular work hours (7:45 a.m.-4:30 p.m., Monday - Friday except holidays).

No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in suspended status without prior approval from the BLM/VFO AO. If operations are to be suspended, prior approval of the BLM/VFO AO will be obtained and notification given before resumption of operations.

A completion rig will be used for completion operations. All conditions of this approved plan will be applicable during all operations conducted with the completion rig.

Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported in accordance with the requirements of NTL-3A or its revision.

The Operator will report production data to the MMS pursuant to 30 CFR 216.5 using form MMS/3160. In accordance with Onshore Oil and Gas Order No. 1, a well will be reported on form 3160-6, "Monthly Report of Operations," starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report will be filed with the BLM/VFO.

The date on which production is commenced or resumed will be determined for oil wells as the date on which liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated, or the date on which liquid hydrocarbons are first produced into a permanent storage facility, whichever occurs first; and for gas wells, as the date on which associated liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated, or the date on which gas is measured through permanent metering facilities, whichever occurs first.

Should the well be successfully completed for production, the BLM/VFO AO will be notified when the well is placed in a producing status. Such notification will be sent by written communication not later than 5 days following the date when the well is placed on production.

Pursuant to Onshore Order No. 7, with the approval of the BLM/VFO AO, produced water may be temporarily disposed of into unlined pits for a period of up to 90 days. During this period, an application for approval of the permanent disposal method must be submitted to the BLM/VFO AO.

Pursuant to NTL-4A, lessees or operators are authorized to vent/flare gas during the initial well evaluation tests, not to exceed 30 days or the production of 50 MMCF of gas, whichever occurs first. An application must be filed with the BLM/VFO AO and approval received for any venting/flaring of gas beyond the initial 30 days or authorized test period.

A schematic facilities diagram, as required by 43 CFR 3162.7-5(b.9.d), shall be submitted to the BLM/VFO AO within 60 days of installation or first production, whichever occurs first. All site security regulations, as specified in Onshore Oil & Gas Order No. 3, shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with 43 CFR 3162.7-5(b.4).

Well abandonment operations shall not be commenced without the prior approval of the BLM/VFO AO. In the case of newly drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the BLM/VFO AO. A "Subsequent Report of Abandonment", Form 3160-5, will be filed with the BLM/VFO AO within 30 days following completion of the well for abandonment. This report will indicate placement of the plugs and current status of the surface restoration. Final Abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the BLM/VFO AO or representative, or the appropriate surface managing agency.

Pursuant to Onshore Oil and Gas Order No. 1, lessees and operators have the responsibility to see that their exploration, development, production, and construction operations are conducted in a manner which conforms with applicable Federal laws and regulations and with the State and local laws, to the extent to which they are applicable, to operations on Federal or Indian lands.

**9. Variances:**

Drilling operations may be conducted without an automatic ignitor while drilling with an air/mist medium.

If a mist system is used, the requirement for a debuster shall be waived.

The straight-run blooie line requirement will be waived. Where ever possible, a straight-run blooie line will be used.

**10. Other Information:**

All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the BLM/VFO Authorized Officer (A).

The oil and gas measurement facilities will be installed on the well location. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy will be conducted following initial installation and at least quarterly thereafter. The BLM/VFO AO will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports will be submitted to the BLM/VFO. All meter measurement facilities will conform with Onshore Oil & Gas Order No. 4 for liquid hydrocarbons and Onshore Oil & Gas Order No. 5 for natural gas measurement.

The use of materials under BLM jurisdiction will conform to 43 CFR 3610.2-3.

The BLM/VFO AO shall approve deviations from the proposed drilling and/or workover program. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended, or abandoned, will be identified in accordance with 43 CFR 3162.

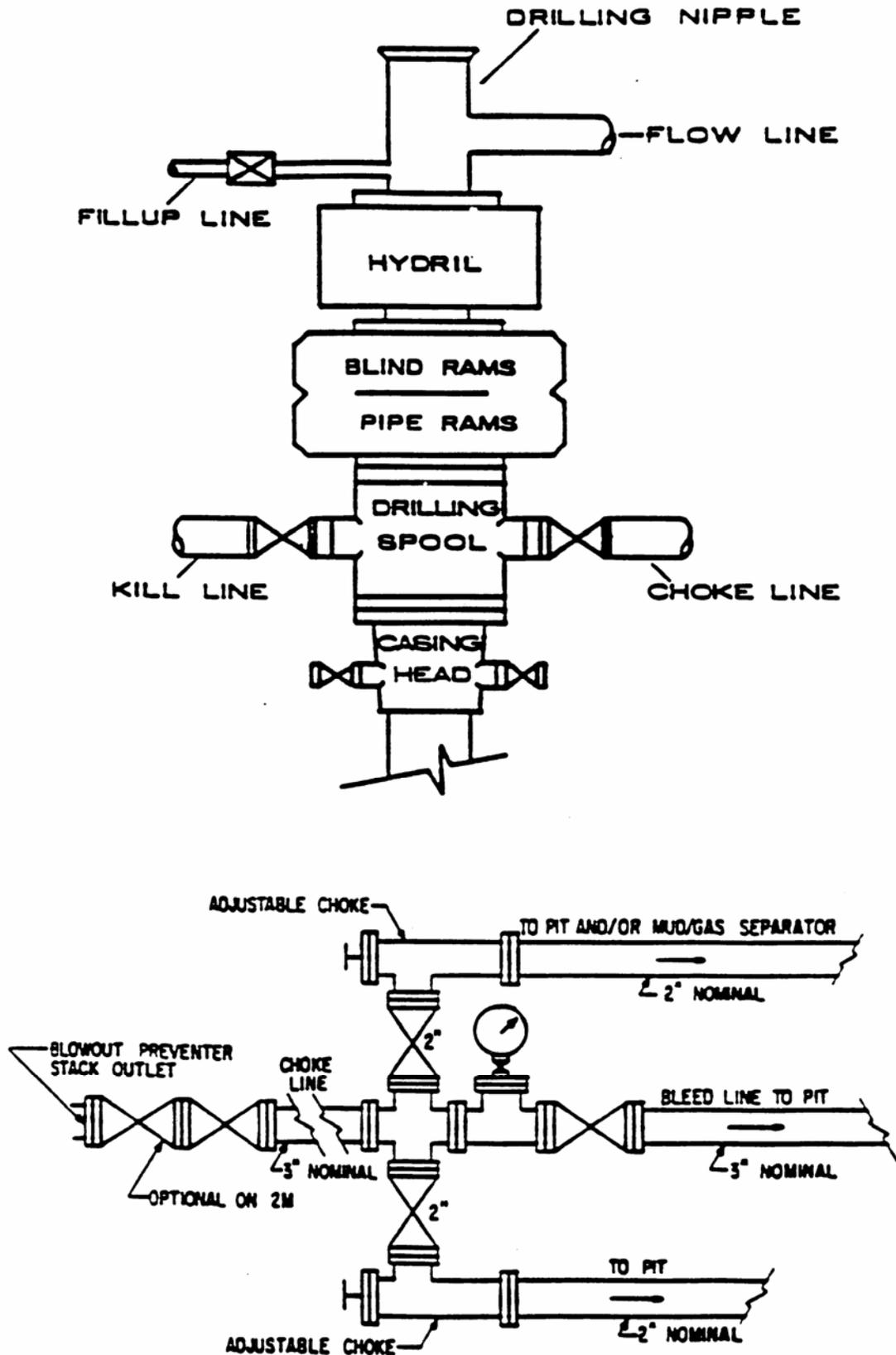
"Sundry Notice and Report on Wells" (form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3162.3-2.

Section 102(b)(3) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provisions of the operating regulations at Title 43 CFR 3162.4-1(c), requires that "not later than the 5<sup>th</sup> business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the Authorized Officer by letter or sundry notice, Form 3160-5, or orally to be followed by a letter or sundry notice, of the date on which such production has begun or resumed."

The APD approval is valid for a period of one year from the signature date. An extension period may be granted by the AO, if requested, prior to the expiration of the original approval period.

In the event after-hours approval or notification is necessary, one of the following individuals will be contacted:

EXHIBIT A  
SCHEMATIC DIAGRAM OF 2,000 PSI BOP STACK



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**Uintah County, Utah**

**STANDARD OPERATING PRACTICES**

**MULTI-POINT SURFACE USE & OPERATIONS PLAN**

**1. Existing Roads:**

The siting of a particular well location will be shown on maps and described in the site-specific Application for Permit to Drill (APD).

Improvements requested to existing access roads will be noted in the site specific APD.

All existing roads will be maintained and kept in good repair during all drilling, completion, and production operations associated with this well.

**2. Planned Access Roads:**

Descriptions of the access road will be included in the site-specific APD. All proposed roads will be center-line flagged during the staking process and prior to conducting the on-site.

Access roads on BLM administered surface shall be approved under an APD, Sundry Notice, or Right-Of-Way (ROW) by the BLM/VFO Authorized Officer (AO). Authorizations for access roads will be attached to the APD.

New access roads on BLM surface will be crowned (2 to 3%), ditched, and constructed with a running surface of 18 feet and a maximum disturbed width of 30 feet. Graveling or capping the roadbed will be performed as necessary to provide a well constructed, safe road. Prior to construction or upgrading, the proposed road shall be cleared of any snow and allowed to dry completely.

The disturbed width needed may be wider than 30 feet to accommodate larger equipment where deep cuts are required for road construction; intersections or where sharp curves occur. These situations will be discussed and a decision made at the on-site. Site-specific proposals will be included in the APD. Surface disturbance and vehicular will be limited to the approved location and access route or, as proposed by the Operator. Approval will be required by the BLM/VFO AO.

Access roads and surface disturbing activities will conform to standards outlined in the BLM and Forest Service publication: Surface Operating Standards for Oil and gas Exploration and Development, 1989.

The road surface and shoulders will be kept in a safe and usable condition and will be maintained in accordance with the original construction standards. All drainage ditches and culverts will be kept clear and free-flowing and will be maintained according to original construction standards. The access road disturbed area will be kept free of trash during operations. All traffic will be confined to the approved road running surface. Road drainage

crossings shall be of the typical dry creek drainage crossing type. Crossings shall be designed so they will not cause excess siltation or accumulation of debris in the drainage nor shall the drainage be blocked by the roadbed. If culverts are needed, the location and size of the culverts will be proposed during the on-site. The operator will clean and maintain approved culverts as needed. Erosion of drainage ditches by runoff water shall be prevented by diverting water off at frequent intervals by means of cutouts. Should mud holes develop, the holes shall be filled in and detours around the holes avoided. When snow is removed from the road during the winter months, the snow should be pushed outside of the borrow ditches, and the turnouts kept clear so that snowmelt will be channeled away from the road.

**3. Location of Existing Wells Within a 1-Mile Radius:**

A map will be provided with the site-specific APD showing the location of existing wells within a one mile radius.

**4. Location of Existing and Proposed Facilities:**

The following guidelines will apply if the well is productive.

- A containment dike will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks). These dikes will be constructed of compacted impervious subsoil; hold 110% of the capacity of the largest tank; and, be independent of the back cut. If a Spill Prevention, Control, and Countermeasure (SPCC) Plan is required by the Environmental Protection Agency, the containment dike may be expanded to meet SPCC requirements with approval by the BLM/VFO AO. The specific APD will address additional capacity if such is needed due to environmental concerns. **The use of topsoil for the construction of dikes will not be allowed.**
- All loading lines will be placed inside the berm surrounding tank battery.
- All permanent (on site six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earthtone color as approved by the BLM/VFO AO.
- All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The required color is Desert Tan (174/FEB 141) unless the BLM/VFO AO determines that another color shall be used.

Surface pipelines will be constructed in accordance with the following guidance. A description of the proposed pipeline will be included as part of the site-specific APD.

- Gas: The pipeline will be unpainted steel, 3" inside diameter, Zap-lock, schedule #20 or greater, unless noted in the APD. The pipeline will be zap-locked together on location and pulled into place. The pipeline will be laid within 20 feet of existing roads, pipelines, or existing route authorizations as much as possible. Pipeline route alternatives will be discussed at the on-site and the resulting proposal will be described in the APD. Road crossings will have a casing installed over the pipeline and ramped so the pipeline will not be buried. Pipeline Route Authorizations will be 20' wide and the location noted on maps accompanying the APD. No grading will be allowed unless it is proposed in the APD.
- Oil: The pipeline will be steel, Zap-lock, schedule #40 or greater, and consist of one (1) 2" inside diameter oil line and two (2) 1" inside diameter trace lines. The pipelines

will be zap-locked together on location and pulled separately into place. The lines will be banded together in one (1) bundle, insulated, and covered with tin painted Desert Tan. The pipeline will be laid within 20 feet of existing roads, pipelines, or existing route authorizations as much as possible. Pipeline route alternatives will be discussed at the on-site and the resulting proposal will be described in the APD. Road crossings will have a casing installed over the pipeline and ramped so the pipeline will not be buried. Pipeline Route Authorizations will be 20` wide and the location noted on maps accompanying the APD. No grading will be allowed unless it is proposed in the APD.

- Fuel Gas: The pipeline will be a 2" inside diameter, poly pipe with a rating of 160 psi or greater. The line will be laid adjacent to the oil or gas lines following the lines to the location. Pipeline route alternatives will be discussed at the on-site and the resulting proposal will be described in the APD.

Buried water injection pipelines will be constructed in accordance with the following guidance. A description of the proposed pipeline will be included as part of the site-specific APD.

- Water Injection: The pipeline will be 2" inside diameter, externally coated Zap-lock, schedule #80, unless noted in the APD. A trench 48" deep will be constructed; the pipeline will be zap-locked in place; and lowered into the trench with a side boom. The pipeline will be laid within 20 feet of existing roads as much as possible. The roads will be used as a work surface wherever possible. Pipeline route alternatives will be discussed at the on-site and the resulting proposal will be described in the APD. Pipeline Route Authorizations will be 20` wide and the location noted on maps accompanying the APD. Topsoil will be stockpiled in order to be respread over surface disturbance. The disturbed area will be seeded and drilled as soon as the work is completed. The seed mixture will be included as part of the site-specific APD.

#### **5. Location and Type of Water Supply:**

Water will be hauled to the location over roads as marked on maps included with the site-specific APD. Unless otherwise specified in the site-specific APD, fresh water for drilling purposes will be obtained from Wonsits Valley Water Right #36125, or Red Wash Water Right #49-2153.

Where possible, a water line (poly pipe) will be laid adjacent to the access road to each location to supply water for drilling purposes.

#### **6. Source of Construction Materials:**

Surface and subsoil materials in the immediate area will be utilized.

Any gravel will be obtained from a commercial source.

The use of materials under BLM jurisdiction will conform with 43 CFR 3610.2-3.

#### **7. Methods of Handling Waste Materials:**

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids, including salts and chemicals, will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be used at the next drill site or will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated. Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

Unless specified in the site specific APD, the reserve pit will be constructed on the location and will not be located within natural drainages, where a flood hazard exists or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, break, or allow discharge of liquids.

If it is determined at the on-site inspection that a pit liner is necessary, the reserve pit will be lined with a synthetic reinforced liner, a minimum of 12 millimeters thick, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap will be disposed of in the pit.

Reserve pit leaks are considered an undesirable event and will be orally reported to the AO.

After first production, produced wastewater will be confined to the approved pit or storage tank for a period not to exceed 90 days. During the 90 day period, in accordance with Onshore Order # 7, all produced water will be contained in tanks on location and then hauled to Wonsits Valley location in SWNW Section 12, T8S, R21E; or, Red Wash Disposal Well located in NESW, Section 28, T7S, R22E; or, Red Wash Central Battery Disposal located in SWSE, Section 27, T7S, R23E.

Pit reclamation will be accomplished using the following procedures:

- Unlined pits: Free liquids will be removed to the extent as reasonably possible, either by hauling to sites as described above and/or through natural evaporation. To promote additional drying, the unlined pit area will be mixed with dry soil and left standing for a period of time prior to covering and compacting the pit area.
- Lined pits: Free liquids will be removed to the extent as reasonably possible, either by hauling to sites as described above and/or through natural evaporation. Liners will be ruptured when emptied to allow the remaining liquid to be adequately mixed and to promote additional drying of the pit area.
- For lined and unlined pits, mixing of pit sediments will be allowed to speed the drying process. No disturbance will be allowed outside of the pit area.

Produced water, oil, and other byproducts will not be applied to roads or well pads for control of dust or weeds. The dumping of produced fluids on roads, well sites, or other areas will not be allowed.

Any spills of oil, gas, salt water, or other noxious fluids will be immediately cleaned up and removed to an approved disposal site. The spills will be reported to the AO and other authorities as appropriate.

A chemical porta-toilet will be furnished with the drilling rig. The chemical porta-toilet wastes will be hauled to Ashley Valley Sewer and Water System for disposal.

Garbage, trash, and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. Trash will not be burned on location. All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig. All trash and waste material will be hauled to the Uintah County Landfill.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of wells within the Red Wash Unit, Wonsits Valley Unit, or areas outside these units which are in the Red Wash Field or

Wonsits Valley Field. Furthermore, extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will not be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completing of wells within these areas. Specific APDs shall address any modifications from this policy.

**8. Ancillary Facilities:**

None anticipated.

**9. Well Site Layout:**

A Location Layout Diagram describing drill pad cross-sections, cuts and fills, and locations of mud tanks, reserve pits, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and the surface material stockpile(s) will be included with the site specific APD.

The diagram will describe rig orientation, parking areas, and access roads, as well as the location of the following:

- The reserve pit.
- The stockpiled topsoil (first six inches), will not be used for facility berms. All brush removed from the well pad during construction will be stockpiled with the topsoil.
- The flare pit, which will be located downwind from the prevailing wind direction.
- Any drainage that crosses the well location will be diverted around the location by using: ditches, water diversion drains or berms. If deemed necessary at the on-site, erosion drains may be installed to contain sediments that could be produced from access roads and well locations.

**10. Fencing Requirements:**

Each existing fence to be crossed by an access road shall be braced and tied off before cutting the wire. The braces will be at a minimum of 2 7/8" outside diameter "od" steel pipe, in order to reduce the need for maintenance and to increase the life of the fence. The braces would consist of three posts and two top rail-braces. The brace posts would be cemented in the ground at a minimum of least 3 feet deep, and welded with a 27/8" top rail, with any open ends capped. The height of the brace posts would be at 42" from the ground to the top of the brace. A 16' steel powder-river type gate would be welded to the fence brace post adjacent to the cattleguard. The steel gate increases the likelihood of the gate being closed after someone goes through it due to the ease of opening and closing the steel gate as opposed to the wire type gates. A cattleguard would be installed on concrete bases. The fencing, braces, gate, cattleguard & bases will follow the provided BLM Standards." QEP will assume the maintenance of all such cattleguards and gates.

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

All pits will be fenced according to the following minimum standards:

- 39 inch net wire will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.

- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched using a stretching device before it is attached to corner posts.
- The reserve pit will be fenced on three (3) sides during drilling operations. The fourth side will be put in place when the rig moves off location. The pit will be fenced and maintained until it is backfilled. If the drilling does not move onto location within 3 days, the fourth side of the fence will be installed. If fluids are placed in the reserve pit prior to drilling, the fourth side of the pit will be fenced until the rig is moved onto location.

**11. Plans for Reclamation of the Surface:**

*Producing Location:*

- Topsoil shall be stripped and salvaged to provide for sufficient quantities to be respread to a depth of at least four (4) to six (6) inches (or more if readily available on-site) over the disturbed areas to be reclaimed. Topsoil shall be stockpiled separately from subsoil materials. Topsoil salvaged from the reserve pit shall be stockpiled separately near the reserve pit. Topsoil to be stored for more than one year:
- Shall be windrowed, where possible, to a depth of three (3) to four (4) feet at the specified location determined at the on-site.
- Immediately after windrowing the topsoil, the approved seed mixture as determined by the AO (Attachment 2), will be broadcast seeded. After seeding, the stockpile will be "walked" with a dozer to cover the seed.

If straw or hay mulch is used, the straw and hay must be certified to be weed-free and the documentation submitted to the AO prior to usage.

- Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, materials, trash, and debris not required for production.
- If a synthetic, nylon reinforced liner is used, the excess liner will be cut off and removed and the remaining liner will be torn and perforated while backfilling the reserve pit. Alternatively, the pit will be pumped dry, the liner folded into the pit, and the pit backfilled.
- Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. Any debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.
- The reserve pit and that portion of the location not needed for production facilities / operations will be recontoured to approximate natural contours. The reserve pit will be reclaimed within 120 days from the date of well completion, weather permitting.

This will be completed by backfilling and crowning the pit to prevent water from standing. The seed mixture as determined by the AO (Attachment 2), will be drilled immediately after the pit is reclaimed. If the seed mixture is broadcasted, the area seeded will be “walked” with a dozer; dragged with a harrow; or, other implement to cover the seed.

*Dry Hole/Abandoned Location:*

- On lands administered by the BLM, abandoned well sites, roads, and other disturbed areas will be restored as near as practical to their original condition. Where applicable, these conditions may include the reestablishment of irrigation systems; reestablishment of appropriate soil conditions; and, the reestablishment of vegetation as specified.

All disturbed surfaces will be recontoured to approximate natural contours, with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. Reseeding operations will be performed after completion of other reclamation operations.

The Authorized Officer of the appropriate surface management agency shall be contacted for the required seed mixture (Attachment 2). The seed will be drilled on the contour to an appropriate depth. The seeding may also be done by broadcasting the seed over the reclaimed area and “walking” the site with a dozer; dragging the site with a harrow; or, other implement to cover the seed.

- At final abandonment, all casing shall be cut off at the base of the cellar or 3 feet below final restored ground level, whichever is deeper, and the casing capped with a metal plate a minimum of 0.25 inch thick. The plate will be welded in place and the well location and identity will be permanently inscribed on the plate. The plate also will be constructed with a weep hole.
- The reclamation site would not be considered a success, unless the vegetation planted, is determined to be established during the 2<sup>nd</sup> growing season after initial planting. The company would be afforded two attempts to establish desired vegetation before the site would be considered un-reclaimable and then the site would be abandoned

**12. Surface Ownership:**

The ownership of the access roads and well pad will be specified on the site specific APD.

**13. Other Information:**

Powerlines: Unless otherwise agreed to by the AO in writing, powerlines shall be constructed in accordance with the standards outlined in Suggested Practices for Raptor Protection on Powerlines, (Raptor Research Foundation, Inc., 1981). QEP will construct the powerline in accordance with these standards or will assume the burden and expense of proving pole designs not shown in the above referenced publication are “raptor safe”. A raptor expert acceptable to the AO shall provide such proof. The AO reserves the right to require modifications or additions to all powerline structures on applied for route authorizations, should they be necessary to ensure the safety of large perching birds. QEP Energy will make such modifications and/or additions without liability or expense to the Federal Government.

All wells submitted after April, 2000, will be in compliance with all applicable laws and regulations of this amended Standard Operating Practices.

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees. The Operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

The Operator will control noxious weeds along access road use authorizations, pipeline route authorizations, well sites, or other applicable facilities by spraying or mechanical removal. Any noxious weed outbreaks attributed to the activities of the lessee will be the responsibility of the lessee to control. A list of noxious weeds may be obtained from the BLM or the appropriate County Extension Office. On BLM administered land, it is required that a Pesticide Use Proposal be submitted and approved prior to the application of herbicides or other pesticides or possibly hazardous chemicals.

Drilling rigs and/or equipment used during drilling operations will not be stacked or stored on Federal lands on BLM administered lands after the conclusion of drilling operations or at any other time without authorization by the BLM/VFO Authorized Officer. If BLM authorization is obtained, such storage is only a temporary measure. Storage at the Red Wash office/yard will be allowed.

Unless previously conducted, a Class III archeological survey will be conducted on all Federal and/or Tribal lands. All personnel will refrain from collecting artifacts and from disturbing any significant cultural resources in the area. The Operator is responsible for informing all persons in the area who are associated with this project that they may be subject to prosecution for knowingly disturbing historic or archaeological sites or for collecting artifacts. All vehicular traffic, personnel movement, construction, and restoration activities shall be confined to the areas examined, as referenced in the archaeological report, and to the existing roadways and/or evaluated access routes. If historic or archaeological materials are uncovered during construction, the Operator is to immediately stop work that might further disturb such materials and contact the Authorized Officer and/or the Ute Tribe Energy and Mineral Department.

Within five working days, the AO will inform the Operator as to:

- Whether the materials appear eligible for the National Historic Register of Historic Places;
- The mitigation measures the Operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and,
- A time frame for the Authorized Officer to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the Authorized Officer are correct and that mitigation is appropriate.

If the Operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the Authorized Officer will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise the Operator will be responsible for mitigation costs. The Authorized Officer will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the Authorized Officer that required mitigation has been completed, The Operator will then be allowed to resume construction.

On surface administered by the BIA, all Surface Use Conditions of Approval associated with the BIA Concurrence letter and Environmental Analysis Mitigation Stipulations will be adhered to, including:

- All contractors used by QEP, when applicable, will have acquired a Tribal Business License and have access permits prior to construction.
- If the surface rights are owned by the Ute Indian Tribe and mineral rights are owned by another entity, an approved right-of-way will be obtained from the BIA before the Operator begins any construction activities. The BIA right-of-way application will be delivered under separate cover. If the surface is owned by another entity and the mineral rights are owned by the Ute Indian Tribe, a right-of-way will be obtained from the other entity.
- Upon completion of the APD and right-of-way construction, the Ute Tribe Energy and Mineral Department will be notified so that a Tribal Technician can verify an Affidavit of Completion.
- Operator's employees, including subcontractors, will not gather firewood along roads constructed by the Operator. If wood cutting is required, a permit will be obtained from the Forestry Department of the BIA pursuant to 25 CFR 169.13 "Assessed Damages Incident to Right-of Way Authorization." The Operator, subcontractors, vendors and their employees or agents may not disturb saleable timber (including firewood) without a duly granted wood permit from the BIA Forester.
- All roads constructed by the Operator on Northern Ute Tribal Lands will have appropriate signage. Signs will be neat and of sound construction. The will state: (a) that the land is owned by the Northern Ute Indian Tribe, (b) the name of the Operator, (c) that firearms are prohibited to all non-Ute Tribal members, (d) that permits must be obtained from the BIA before cutting firewood or other timber products, and (e) only authorized personnel permitted.
- All well site locations on Northern Ute Tribal Lands will have appropriate signage indicating the name of the Operator, the lease serial number, the well name and number, the survey description of the well (either footages or the quarter/quarter section, the section, township, and range).

**14. Lessee's or Operator's Representative and Certification:**

Red Wash Operations Representative  
Questar Exploration & Production  
11002 East 17500 South  
Vernal UT 84078  
(435)781-4341

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Site specific certification will be submitted with the site specific APD.

**ATTACHMENT 1**

**EPA's LIST OF NONEXEMPT EXPLORATION AND PRODUCTION WASTES**

While the following wastes are nonexempt, they are not necessarily hazardous.

- Unused fracturing fluids or acids
- Gas plant cooling tower cleaning wastes
- Painting wastes
- Oil and gas service company wastes, such as empty drums, drum rinsate, vacuum truck rinsate, sandblast media, painting wastes, spent solvents, spilled chemicals, and waste acids
- Vacuum truck and drum rinsate from trucks and drums, transporting or containing nonexempt waste
- Refinery wastes
- Liquid and solid wastes generated by crude oil and tank bottom reclaimers
- Used equipment lubrication oils
- Waste compressor oil, filters, and blowdown
- Used hydraulic fluids
- Waste solvents
- Waste in transportation pipeline-related pits
- Caustic or acid cleaners
- Boiler cleaning wastes
- Boiler refractory bricks
- Incinerator ash
- Laboratory wastes
- Sanitary wastes
- Pesticide wastes
- Radioactive tracer wastes
- Drums, insulation and miscellaneous solids

**ATTACHMENT 2**

**STANDARD SEED MIXES**

#1.	Fourwing Saltbush Needle and Threadgrass Indian Ricegrass crested wheatgrass	<i>Atriplex canescens</i> <i>Stipa comata</i> <i>Oryzopsis hymenoides</i>	4 lbs. / acre 4 lbs. / acre 4 lbs. / acre 1lbs. / acre
#2.	Fourwing Saltbush Needle and Threadgrass Western Wheatgrass crested wheatgrass	<i>Atriplex canescens</i> <i>Stipa comata</i> <i>Agropyron smithii</i>	4 lbs. / acre 4 lbs. / acre 4 lbs. / acre 1lbs. / acre
#3.	Black Sagebrush Western Wheatgrass Galleta Grass crested wheatgrass	<i>Artemesia arbuscula nova</i> <i>Agropyron smithii</i> <i>Hilaria jamesii</i>	1 lb. / acre 6 lbs. / acre 5 lbs. / acre 1lbs. / acre
#4.	Fourwing Saltbush Indian Ricegrass Globe Mallow (scarlet or munro) crested wheatgrass	<i>Atriplex canescens</i> <i>Oryzopsis hymenoides</i> <i>Sphaeralcea coccinea</i> or <i>Sphaeralcea munroana</i>	4 lbs. / acre 4 lbs. / acre 4 lbs. / acre 1lbs. / acre
#5.	Gardner Saltbush Shadscale	<i>Atriplex gardneri</i> <i>Atriplex confertifolia</i>	6 lbs. / acre 6 lbs. / acre